



Cooling as a Service
Refresh the planet

Case Study



CaaS Unlocks Most Sustainable Cooling Solution for Indian Commercial Precinct

“India’s most intelligent air-conditioning system,” the AI-powered chiller plant at 1 Elpro Business Park runs on 100% solar energy and provides a surplus of clean energy that can power over 200 Indian households for a year. It was installed by Kaer, who is also maintaining it – all under a servitisation contract.

Country/Region

India

Sector

Real Estate including commercial buildings, office space and a school.

Retrofit OR New

New

Project Size (cooling equipment)

(HVAC equipment)
700RT

Technology

Chilled water

Customer Name

Elpro International Ltd.

Partners



Background

1 Elpro Business Park & Elpro City Square are part of Elpro Park, a mixed-use development in Pimpri Chinchwad, Pune (India), comprising a retail centre, offices, and community spaces. It is part of a larger development that includes residential housing, schools, and offices. It is also the only development of its kind within a radius of 12kms offering diverse retail and entertainment experiences.

Elpro Park is an innovative, state of the art commercial development designed to host the business of 'tomorrow today'. It offers solar-powered offices complete with centralised air conditioning, rain harvesting, energy efficient lighting, along with a unified facility management to be in sync with nature.

“Working with KAER allowed us to guarantee clean air for all our customers. They're able to provide unmatched levels of service with a system that is 100% run on solar energy.”

Deepak Kumar, Managing Director,
Elpro International Ltd.

CaaS model at the 1 Elpro Business Park

Kaer's solution delivers highly efficient, zoned comfort with the help of a centralised chilled water system provided through the CaaS model. The complex provides a lifestyle centre to simplify people's lives, and advanced technology to enhance efficiency and users' conveniences. The customer required the business park to have a more positive impact on the environment than standard buildings. As such, Kaer provides cooling with a highly efficient air-conditioning system and offers superior indoor air quality monitoring as well.

How does it work? Residents, office workers and users only pay for the cooling service they receive, while operation, maintenance and repairs are provided by Kaer. The entire system can be run and monitored remotely from groups offices as well. The suggested solution through CaaS requires a much lower cooling load when compared to standard air conditioning systems because the air-side systems operate in a part-time-part-space mode, automatising air-conditioning in such a way that it operates only when needed and when the spaces are occupied. The AI-driven algorithms help to optimise the operation of the system. The traditional air conditioning systems on the other hand operated in the full-time-full-space mode, limiting occupants' control of the operation.

Elpro City Square main entry.



KEY

- M METROPOLITAN
- ELPRO™ CITY SQUARE
- PLAZA
- FUTURE DEVELOPMENT
- GARDEN
- ELPROPARK
- CHINCHWAD BUS STAND
- AMPHITHEATER
- GOLD CRAFT
- METROPOLIS
- VISION EXCHANGE
- ELPRO EDUCATION BAY
- B PRAHABAG VIBHAG - PCMC



1 Elpro Business Park map.

“For us, India represents the single largest market in the world to really make an impact,” says Kaer CEO, Justin Taylor. India’s economy is growing exponentially and their requirements for sustainable cooling solutions is probably some of the greatest globally. “Our precinct approach in Pune has delivered wonderful results for the business model. It has proved that we can provide reliable cooling with exact conditions to mission critical facilities with a positive impact on the environment.”

Kaer’s journey with CaaS

Kaer is a 70-year-old Singapore-based company that introduced air conditioning to Asia in the 1950s and pioneered Cooling as a Service in 2013 already. Its business expanded to India in 2019 to bring the benefits of servitisation to the world’s fastest growing air-conditioning market.

“The transition to CaaS was driven by our customers,” explains David Mackerness, Kaer’s Customer Success Lead. “We looked around and saw that the world was transitioning to the service economy. In every market and every industry, customers were demanding services instead of products and it was having massive impacts on customer experience, technological advances and step changes in sustainable development. We just thought, why can’t we do that for air-con?”

So, they restructured the organisation, hired software engineers, data scientists and user-experience specialists and launched the product in just six months. In just five years, CaaS became their core business, and Kaer now serves over 10 million square feet of space across the region. “At Kaer we envision a future where every building signs up to the CaaS model,” says Taylor.

The move to CaaS completely transformed its business, its priorities and its people. Instead of focusing on equipment and hardware, it is all about software and data that can deliver a better customer experience. Kaer now spends more on software development than any other part of its business and its recruitment strategy revolves around data scientists, software developers and user experience designers.

According to Taylor, Kaer developed CaaS to bring the three main benefits of servitisation to the air-conditioning market:

1. Customer centricity
 - a. Customers don’t want to buy products, they want to buy experiences and services that they can then package to fulfil their purpose and mission.
 - b. Customers want to focus on their core business and invest their capital into things that delight their customers.

2. Scale to unlock world changing innovation

a. With a diversified portfolio of \$50M of assets under management serving over 10M sqft. of space, Kaer invests in technology to drive their customer experience and has developed software and AI platforms that have shifted the needle on performance metrics.

b. Kaer has become a software company and this approach has helped maximise the utilisations of all their cooling assets.

3. Sustainable development

a. The sustainability opportunities are massive as all stakeholders are aligned to be as sustainable and circular as possible.

b. Illustrated by many of our customers being served with air-con that is 100% renewable (electricity and water).

It all started in Singapore and Kaer has since expanded its CaaS offering into India and Malaysia as well. They have also had conversations in Australia, Korea, Thailand and Vietnam which are all on their roadmap in the next three years. Kaer has raised \$100M to deploy air-conditioning assets on a CaaS basis throughout south east Asia

End user benefits to choosing CaaS

"As one of India's premier developers, we deliver dynamic and vibrant places and customer experiences to meet a wide range of people's needs," explained Deepak Kumar, Managing Director of Elpro International. "An increasingly important requirement of our customers is providing healthy, comfortable air throughout all of our spaces in a sustainable and environmentally friendly way."

As such, when evaluating options for cooling, there were three reasons that resulted in the developers choosing CaaS, according to Kumar:

1. First and foremost was the guarantee of clean, healthy air for our customers.
2. Secondly was the ability for CaaS to provide this level of service with a system that was 100% run on renewable energy.
3. Lastly, it allowed us to focus on our core business and simply pay-as-we-use. No hassle, no complications, just a simple bill every month.

One of the buildings served by Kaer's energy efficient system is that of the Elpro International School where

1 Elpro Business Park KAER's CaaS systems.



they are responsible for providing a safe and conducive environment for 4,000 students to learn and develop into global citizens and leaders of future generations.

“One of the areas that concerns us, and many other schools around the world is the quality of the air we are providing to our children,” explains Amrita Vora, Principal of Elpro International School. “With so much pollution in our major cities we are continuously looking for ways to protect our children from the harmful effects of pollution.”

Not only that but studies are increasingly showing the academic and developmental benefits of allowing kids to learn in healthy, clean and fresh air. “With Kaer Air, we deliver filtered healthy and cool air to our students.”

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Elpro City Square commercial space.